

(PATENT)

REMARKS/ARGUMENTS

Claims 1-20 are pending in this patent application. Claims 12-20 are deemed withdrawn. Claims 1-11 currently stand rejected, wherein claims 7, 9 and 10 are deemed to contain allowable subject matters and would be allowable if re-written into proper forms.

In this response, the Applicant amends Claim 1 to more clearly point out the subject matter, which should not be considered as a change to the scope of the claim. Two new claims, i.e. Claims 21 and 22, are added. All amendments are supported at least by paragraph [0037] of the specification. No new matter has been introduced by this response.

Amended Claim 1 is Clear to a Person Skilled in the Art

The Applicant has amended Claim 1 to recite “characterized by a plurality of fluid-tight chambers . . . having a preset internal pressure substantially different from atmospheric pressure.”

The term “substantially” is at least supported by paragraph [0037] of the specification (“In addition, the fluid-tight chambers 32 are sealed by a diaphragm 35 of silicon dioxide, which closes respective inlets 36 of the fluid-tight chambers 32 so as to maintain a preset pressure value, considerably lower than atmospheric pressure (for example, 100 mtorr).”). It is also supported by that the micropump of the current invention is obviously intended to provide fluid movements. Therefore, to a person skilled in the art, the pressure difference between the inside and outside of the chambers must be of a substantial level so as to cause displacement of fluid when the diaphragm is opened.

With respect to “atmospheric pressure,” the Applicant respectfully submits that a person skilled in the art would ordinarily understand that the reference is to **standard** atmospheric pressure, which is one atmosphere or 760 Torr, and Applicant in fact intends this usage. There is no ambiguity or indefiniteness caused by this term. Therefore, the amended claim fulfills the requirements of 35 USC §112, second paragraph.

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Applicant believes that the language is now clear and definite. Applicants have also suggested alternate language that attempts to convey this structural limitation in withdrawn claim 20. However, to the extent that the Examiner can suggest language that more clearly conveys Applicant's intent, Applicant would appreciate the assistance.

"A Preset Internal Pressure" is A Valid Claim Limitation, and Cannot be Omitted During Prosecution

In the Final Office Action, the Examiner considers the phrase "a preset internal pressure" as merely a recitation of the intended use of the device, not a structural limitation of the claim. The Applicants respectfully disagree.

At the outset, the Applicant submits that the recitation of "a preset internal pressure" is not directed to the intended use of the current invention. The intended use of the invention is to move fluid along the channels, as described in the specification of the current application. Quite to the contrary, "a preset internal pressure" is a **structural limitation** that defines the properties of the chambers. To explain by analogy, a balloon filled with regular air is structurally different from a balloon filled with gaseous helium. Similarly, a chamber with a preset internal pressure that is considerably different from the pressure of the outside (e.g. a standard atmospheric pressure) is structurally different from a chamber containing the same pressure as outside the chamber. At the minimum, the number of air molecules inside the chamber differs.

Therefore, "a preset internal pressure" is a valid structural limitation to the claim, not merely a recitation of the intended use. Examiner has no legal basis for ignoring this limitation. It **cannot** simply be omitted during the examination of the current application. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997) ("Each element contained in a patent claim is deemed material to defining the scope of the patented invention.").

Applicant also notes that the USPTO has **previously** issued patents that contain claim limitations that are similarly directed to the "pressure" inside a chamber. The Examiner's attention is respectfully directed to US 6,445,062, for example.

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In summary, the Applicant respectfully submits that the claim limitation of “a preset internal pressure” should be considered when evaluating the patentability of the current application. The claim limitation distinguishes the current application from the prior art, is not obvious in light of the prior art, and therefore, renders the claims of the current application patentable over the prior art. Therefore, reconsideration of the rejections under 35 USC 102 and 103 over Ahn (US 6,116,863) is sincerely solicited.

Objection to the Drawings

The Examiner has requested amendments to the Figures 3, 5, 10, 13 and 20 because “parts in section are not hatched.” As stated in the response to the last Office Action, Figures 3, 5, 10, 13 and 20 are structural drawings showing the cross-sections of the entire device, and would be obscured by crosshatching. The Applicant respectfully requests the Examiner to reconsider the objection, and in the event this objection is maintained, to allow the Applicant to **postpone** the amendments until the current application is passed to issuance.

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CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue. Applicant respectfully requests the Examiner contact the undersigned if there are any questions. The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account No. 50-3420, under Order No. 31175803-005001 (Valoir).

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Respectfully submitted,

By /Tamsen Valoir/

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